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**CLAIMS**

1. Device (1) for detecting a leak in a tyre (2) of a motor vehicle wheel (3), comprising means (4) for measuring the pressure of the gas contained in the tyre (2), means (4, 5, 6) for collecting pressure measurement data and means (7) for calculating the change in pressure between two instants of measurement data collection, which device is characterized in that it includes clocking means (8, 9) for clocking the time of the measurement data collection and for calculating the change in pressure between clocked instants of collection.
- 15 2. Device according to Claim 1, in which a module (73) is provided for calculating clocking differences between successive measurement data.
- 20 3. Device according to either of Claims 1 and 2, in which the data collection means are designed to transmit a signal (9) for interrupting the clocking means (8) in order to record in the memory (82) the instant of receipt of the measurement data.
- 25 4. Device according to one of Claims 1 to 3, in which means (4) are provided for measuring the temperature of the gas contained in the tyre, the collection means (4, 5, 6) are designed to also collect the temperature measurement, and the clocking and calculating means (7, 8) are designed to temperature-compensate the pressure measurement.
- 35 5. Device according to Claim 4, in which the calculating means (7, 8) are designed to establish the equation:

$$P_c = (P_m + 1.014) \frac{T_{ref}}{T_m} - 1.014$$

in which  $P_c$  and  $P_m$  are relative pressures, the temperatures  $T_{ref}$  and  $T_m$  being expressed in kelvin.

6. Device according to either of Claims 4 and 5, in which means are provided for transmitting an alarm signal controlled by the compensated pressure.

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7. Device for detecting underinflation of a tyre (2) of a motor vehicle wheel (3), comprising means (4) for measuring the pressure and temperature of the gas contained in the tyre (2) and means (4, 5, 6) for 10 collecting the pressure and temperature measurement data, characterized in that calculating means (7) are provided for temperature-compensating the pressure measurement.

15 8. Device according to Claim 7, in which the calculating means (7) are designed to establish the equation:

$$P_c = (P_m + 1.014) \frac{T_{ref}}{T_m} - 1.014$$

in which  $P_c$  and  $P_m$  are relative pressures, the 20 temperatures  $T_{ref}$  and  $T_m$  being expressed in kelvin.